

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An electrical device for generating a multi-rate pseudo random noise (PN) sequence comprising:

——a sequence generator ~~adapted~~ to output a plurality of sequence values based on a step control signal (S_t);

——a selection system ~~adapted~~ to select one of said plurality of sequence values based on a select value (M_t), wherein said select value (M_t) is provided based on a clock control value or signal (C_t) and a previously generated select value; and

——a step control adapted to provide said step control signal (S_t), wherein said step control signal (S_t) is provided based on said clock control value or signal (C_t) and said previously generated select value.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) ~~An~~ The electrical device according to claim 1, wherein:

——said plurality of sequence values is two;

——said select value (M_t) is calculated as $M_t = (C_t + M_{t-1}) \text{ MOD } 2$; and

——said step control signal (S_t) is calculated as $S_t = (C_t + M_{t-1}) \text{ DIV } 2$.

5. (Currently Amended) ~~An~~ The electrical device according to claim 1, wherein:

——said plurality of sequence values is N , where N is at least 3;

——said select value (M_t) is calculated as $M_t = (C_t + M_{t-1}) \text{ MOD } N$; and

——said step control signal (S_t) is calculated as $S_t = (C_t + S_t) \text{ DIV } N$.

6. (Currently Amended) ~~An~~ The electrical device according to claim 1, wherein said sequence generator comprises a windmill polynomial sequence generator.

7. (Currently Amended) ~~A~~ The electrical device according to claim 6, wherein said sequence generation means comprises:

- a plurality of delay elements;
- step control unit receiving a next block control signal as input; ~~and~~
- sum elements; and;

where each said delay element is connected to another and two of them are additionally connected to themselves via said sum element.

8. (Currently Amended) ~~A~~ The electrical device according to claim 1, wherein said electrical device is used in a portable device.

9. (Currently Amended) ~~A~~ The device according to claim 8, wherein said portable device comprises a mobile telephone.

10. (Currently Amended) ~~A~~ The device according to claim 1, wherein said electrical device is used in a stationary communication device.

11. (Currently Amended) A method of generating a multi-rate PN sequence comprising the steps of:

— generating a plurality of sequence values based on a step control signal (S_t), the method further comprising the steps of:

— providing a select value (M_t), wherein said select value (M_t) is based on a clock control value or signal (C_t) and a previously generated select value;

— providing the step control signal (S_t), wherein said step control signal (S_t) is based on said clock control value or signal (C_t) and said previously generated select value; and

— selecting one of said plurality of sequence values on the basis of the select value (M_t).

12. (Canceled)

13. (Canceled)

14. (Currently Amended) ~~A~~ The method according to claim 11, wherein:

- said plurality of sequence values is two;
- said select value (M_t) is calculated as $M_t = (C_t + M_{t-1}) \text{ MOD } 2$; and
- said step control signal (S_t) is calculated as $S_t = (C_t + M_{t-1}) \text{ div } 2$.

15. (Currently Amended) ~~A~~ The method according to claim 11, wherein:

- said plurality of sequence values is N , where N is at least 3;
- said select value (M_t) is calculated as $M_t = (C_t + M_{t-1}) \text{ MOD } N$; and
- said step control signal (S_t) is calculated as $S_t = (C_t + S_t) \text{ DIV } N$.

16. (Currently Amended) ~~A~~ The method according to claim 11, wherein said plurality of sequence values is generated by a windmill polynomial sequence generator.

17. (Currently Amended) ~~A~~ The method according to claim 11, wherein said method is used in a portable device.

18. (Currently Amended) ~~A~~ The method according to claim 17, wherein said method is used in a mobile telephone.

19. (Currently Amended) ~~A~~ The method according to claim 11, wherein said method is used in a stationary communication device.